H.K.E. Society's S.L.N College of Engineering

UG Course Outcomes for 2022-23 Courses	
Department of Civil Engineering	
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**I**
Course Name	**Mathematics – I for Civil Engineering**
Course Code	**BMATS101**
Course	**Course Outcome**
CO1	Apply the knowledge of calculus to solve problems related to polar curves
CO2	Analyze the solution of linear and nonlinear ordinary differential equations
CO3	Get acquainted and to apply modular arithmetic to computer algorithms
CO4	Make use of matrix theory for solving the system of linear equations and compute
CO5	Familiarize with modern mathematical tools namely MATHEMATICA/MATLAB/
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**I**
Course Name	**Chemistry for Civil Engineering stream**
Course Code	**BCHEC102**
Course	**Course Outcome**
CO1	Identify the terms processes involved in scientific and engineering an
CO2	Explainthephenomenaofchemistrytodescribethemethodsofengineeringprocesses
CO3	Solvefortheproblemsinchemistrythatarepertinentinengineeringapplications
CO4	Applythebasicconceptsofchemistrytoexplainthechemicalpropertiesandprocesses
CO5	Analyzes processes associated withchemical substances in properties and multidisciplinary situation
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**I**
Course Name	**Computer Aided Engineering Drawing**
Course Code	**BCEDK103**
Course	**Course Outcome**
CO1	Drawand communicate the objects with definite shape and dimensions
CO2	Recognize andDraw the shape and size of objects through different views
CO3	Develop the lateral surfaces of the object
CO4	Create a Drawing views using CAD software.
CO5	Identify the interdisciplinary engineering components or systems through its graphical representation.
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**I**
Course Name	**Introduction to C Programming**
Course Code	**BESCK104E**
Course	**Course Outcome**
CO1	Elucidate the basic architecture and functionalities of a Computer
CO2	Apply programming constructs of C language to solve the real-world problems
CO3	Explore user-defined data structures like arrays, structures and pointers in implementing solutions to problems

CO4	Design and Develop Solutions to problems using modular programming constructs such as functions and procedures
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**I**
Course Name	**Waste Management**
Course Code	**BETCK105F**
Course	**Course Outcome**
CO1	Apply the basics of solid waste management towards sustainable development
CO2	Apply technologies to process waste and dispose the same
CO3	Design working models to convert waste to energy
CO4	Identify and classify hazardous waste and manage the hazard
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**I**
Course Name	**Communicative English**
Course Code	**BENGK106**
Course	**Course Outcome**
CO1	Understand and apply the Fundamentals of Communication Skills in their
CO2	Identify the nuances of phonetics, intonation and enhance pronunciation skills.
CO3	To impart basic English grammar and essentials of language skills as per present
CO4	Understand and use all types of English vocabulary and language proficiency
CO5	Adopt the Techniques of Information Transfer through presentation.
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**I**
Course Name	**Indian Constitution**
Course Code	**BICOK107**
Course	**Course Outcome**
CO1	Analyse the basic structure of Indian Constitution.
CO2	Remember their Fundamental Rights, DPSP's and Fundamental Duties (FD's) of our
CO3	Know about our Union Government, political structure & codes, procedures
CO4	Understand our State Executive & Elections system of India.
CO5	Remember the Amendments and Emergency Provisions, other important provisions given by the constitution
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**I**
Course Name	**Scientific Foundation for Health**
Course Code	**BSFHK158**
Course	**Course Outcome**
CO1	To understand and analyse about Health and wellness (and its Beliefs) & It's balance for positive mindset.
CO2	Develop the healthy lifestyles for good health for their better future
CO3	Build a Healthy and caring relationships to meet the requirements of good/social/p
CO4	To learn about Avoiding risks and harmful habits in their campus and outside the campus for their bright future.

CO5	Prevent and fight against harmful diseases for good health through positive mindset
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**II**
Course Name	**Mathematics – II for Civil Engineering**
Course Code	**BMATC201**
Course	**Course Outcome**
CO1	Apply the concept of change of order of integration and variables to evaluate
CO2	Understand the applications of vector calculus refer to solenoidal, and irrotational
CO3	Demonstrate the idea of Linear dependence and independence of sets in the vector
CO4	Apply the knowledge of numerical methods in analysing the discrete data and
CO5	Get familiarize with modern mathematical tools namely MATHEMATICA/ MATLAB
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**II**
Course Name	**PHYSICS FOR CIVIL ENGINEERING**
Course Code	**BPHYC202**
Course	**Course Outcome**
CO1	Elucidate the concepts in oscillations, waves, elasticity and material failures
CO2	Summarize concepts of acoustics in buildings and explain the concepts in radiation and
CO3	Discuss the principles photonic devices and their application relevant to civil engineering
CO4	Describe the various natural hazards and safety precautions.
CO5	Practice working in groups to conduct experiments in physics and perform precise and h
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**II**
Course Name	**Engineering Mechanics**
Course Code	**BCIVC203**
Course	**Course Outcome**
CO1	Compute the resultant of a force system and resolution of a force
CO2	Comprehend the action for forces, moments, and other types of loads on rigid bodies
CO3	Analyse the frictional resistance offered by different planes
CO4	Locate the centroid and compute the moment of inertia of sections
CO5	Analyze the bodies in motion
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**II**
Course Name	**Introduction to Mechanical Engineering**
Course Code	**BESCK204D**
Course	**Course Outcome**
CO1	Explain the concepts of Role of Mechanical Engineering and Energy sources.
CO2	Describe the Machine Tool Operations and advanced Manufacturing process.
CO3	Explain the Working Principle of IC engines and EV vehicles.
CO4	Discuss the Properties of Common Engineering Materials and various Metal Joining Proc
CO5	Explain the Concepts of Mechatronics, Robotics and Automation in IoT
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**II**

Course Name	**Introduction to Phyton Programming**
Course Code	**BPLCK205B**
Course	**Course Outcome**
CO1	Demonstrate proficiency in handling loops and creation of functions.
CO2	Identify the methods to create and manipulate lists, tuples and dictionaries.
CO3	Develop programs for string processing and file organization
CO4	Interpret the concepts of Object-Oriented Programming as used in Python
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**II**
Course Name	**Professional Writing Skills in Engineering**
Course Code	**BPWSK206**
Course	**Course Outcome**
CO1	To understand and identify the Common Errors in Writing and Speaking.
CO2	To Achieve better Technical writing and Presentation skills
CO3	To read Technical proposals properly and make them to Write good technical reports.
CO4	Acquire Employment and Workplace communication skills.
CO5	To learn about Techniques of Information Transfer through presentation in different lev
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**II**
Course Name	**Innovation and Design Thinking**
Course Code	**BIDTK258**
Course	**Course Outcome**
CO1	Appreciate various design process procedure
CO2	Generate and develop design ideas through different technique
CO3	Identify the significance of reverse Engineering to Understand products
CO4	Draw technical drawing for design ideas
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**III**
Course Name	**TRANSFORM CALCULUS, FOURIER SERIES AND NUMERICAL TECHNIQUES**
Course Code	**21MAT31**
Course	**Course Outcome**
CO1	To solve ordinary differential equations using Laplace transform.
CO2	Demonstrate Fourier series to study the behaviour of periodic functions and their
CO3	To use Fourier transforms to analyze problems involving continuous-time signals
CO4	To solve mathematical models represented by initial or boundary value problems
CO5	Determine the extremals of functionals using calculus of variations and solve in
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**III**
Course Name	**Geodetic Engineering**
Course Code	**21CV32**
Course	**Course Outcome**
CO1	Execute survey using compass and plane table
CO2	Find the level of ground surface and Calculation of area and volumes
CO3	Operate theodolite for field execution

CO4	Estimate the capacity of reservoir
CO5	Interpret satellite imageries
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**III**
Course Name	**Strength of Materials**
Course Code	**21CV33**
Course	**Course Outcome**
CO1	Evaluate the behaviour when a solid material is subjected to various types of forces
CO2	Estimate the forces developed and draw schematic diagram for stresses, forces,
CO3	Evaluate the behaviour when a solid material is subjected to Torque and internal fluid
CO4	Distinguish the behaviour of short and long column and calculate load at failure &
CO5	Examine and Evaluate the mechanical properties of various materials under different loa
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**III**
Course Name	**Earth Resources and Engineering**
Course Code	**21CV34**
Course	**Course Outcome**
CO1	Apply geological knowledge in different civil engineering practice
CO2	Students will acquire knowledge on durability and competence of foundation rocks,
CO3	competent enough to provide services for the safety, stability, economy and life of the
CO4	Able to solve various issues related to ground water exploration, build up dams,
CO5	Intelligent enough to apply GIS, GPS and remote sensing as a latest tool in different
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**III**
Course Name	**Computer Aided Building Planning and Drawing**
Course Code	**21CVL35**
Course	**Course Outcome**
CO1	Prepare, read and interpret the drawings in a professional set up.
CO2	Know the procedures of submission of drawings and Develop working and submission d
CO3	Plan and design of residential or public building as per the given requirements.
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**III**
Course Name	**Computer Aided Building Planning and Drawing**
Course Code	**21CVL35**
Course	**Course Outcome**
CO1	Understand social responsibility
CO2	Practice sustainability and creativity
CO3	Showcase planning and organizational skills
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**III**
Course Name	**Constitution of India and Professional Ethics**
Course Code	**21CIP37**
Course	**Course Outcome**

CO1	Have constitutional knowledge and legal literacy.
CO2	Understand Engineering and Professional ethics and responsibilities of Engineers

Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**III**
Course Name	**Personality Development and Soft Skills**
Course Code	**21CV383**
Course	**Course Outcome**
CO1	Develop effective communication skills (spoken and written) and effective
CO2	Conduct effective business correspondence and prepare business reports which produc
CO3	Develop an understanding of and practice personal and professional responsibility.
CO4	Function effectively in multi-disciplinary and heterogeneous teams through the

Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**III**
Course Name	**Additional Methematics**
Course Code	**21MATDIP 31**
Course	**Course Outcome**
CO1	Use derivatives and partial derivatives to calculate the rate of change of
CO2	Apply concepts of complex numbers and vector algebra to analyse the problems
CO3	Analyse position, velocity and acceleration in two and three dimensions of vector-
CO4	Learn techniques of integration including the evaluation of double and triple
CO5	Identify and solve first-order ordinary differential equations.

Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**IV**
Course Name	**Complex Analysis, Probability and Statistical Methods**
Course Code	**21MAT41**
Course	**Course Outcome**
CO1	Use the concepts of an analytic function and complex potentials to solve the
CO2	Obtain series solutions of ordinary differential equation
CO3	Make use of the correlation and regression analysis to fit a suitable mathematical
CO4	Apply discrete and continuous probability distributions in analysing the
CO5	Construct joint probability distributions and demonstrate the validity of testing

Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**IV**
Course Name	**Fluid Mechanics and Hydraulics**
Course Code	**21CV42**
Course	**Course Outcome**
CO1	Understand fundamental properties of fluids and solve problems on Hydrostatics
CO2	Apply Principles of Mathematics to represent Kinematics and Bernoulli's
CO3	Compute discharge through pipes, notches and weirs
CO4	Design of open channels of various cross sections
CO5	Design of turbines for the given data and understand their operation

Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**IV**
Course Name	**Public Health Engineering**

Course Code	**21CV43**
Course	**Course Outcome**
CO1	Estimate average and peak water demand for a community
CO2	Evaluate water quality and environmental significance of various parameters and
CO3	Design the different units of water treatment plant
CO4	Understand and design the various units of wastewater treatment plant
CO5	Acquire capability to conduct experiments and estimate the concentration of
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**IV**
Course Name	**Analysis of Structures**
Course Code	**21CV44**
Course	**Course Outcome**
CO1	Evaluate slope and deflections in beams using geometrical methods.
CO2	Determine deflections in trusses and frames using energy principles.
CO3	Analyse arches and cables for stress resultants.
CO4	Apply slope defection method in analysing indeterminate structures and construct
CO5	Analyse continuous beams, frames and trusses using stiffness matrix method of
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**IV**
Course Name	**Biology for Engineers**
Course Code	**21BE45**
Course	**Course Outcome**
CO1	Elucidate the basic biological concepts via relevant industrial applications and
CO2	Evaluate the principles of design and development, for exploring novel
CO3	Corroborate the concepts of biomimetics for specific requirements
CO4	Think critically towards exploring innovative biobased solutions for socially
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**IV**
Course Name	**Earth Resources and Engineering Laboratory**
Course Code	**21CVL46**
Course	**Course Outcome**
CO1	Comprehend the relations between minerals and rocks based on their
CO2	Assessthe suitability of materials used in building construction
CO3	Differentiate geological investigations necessary for the construction of dams,
CO4	Describe the groundwater investigation using resistivity methods
CO5	Understand the applications of Geospatial technology in Civil Engineering
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**IV**
Course Name	**Additional Mathematics-I**
Course Code	**21MATDIP31**
Course	**Course Outcome**
CO1	Use derivatives and partial derivatives to calculate the rate of change of
CO2	Apply concepts of complex numbers and vector algebra to analyse the problems
CO3	Analyse position, velocity and acceleration in two and three dimensions of vector-

CO4	Learn techniques of integration including the evaluation of double and triple
CO5	Identify and solve first-order ordinary differential equations.
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**V**
Course Name	**Construction Management and Entrepreneurship**
Course Code	**18CV51**
Course	**Course Outcome**
CO1	Prepare a project plan based on requirements and prepare schedule of a project by
CO2	Understand labour output, equipment efficiency to allocate resources required for
CO3	Analyze the economics of alternatives and evaluate benefits and profits of a
CO4	Establish as an ethical entrepreneur and establish an enterprise utilizing the
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**V**
Course Name	**Analysis of Indeterminate Structures**
Course Code	**18CV52**
Course	**Course Outcome**
CO1	Determine the moment in indeterminate beams and frames having variable
CO2	Determine the moment in indeterminate beams and frames of no sway and sway
CO3	Construct the bending moment diagram for beams and frames by Kani's method
CO4	Construct the bending moment diagram for beams and frames using flexibility
CO5	Analyze the beams and indeterminate frames by system stiffness method
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**V**
Course Name	**Design of RC Structural Elements**
Course Code	**18CV53**
Course	**Course Outcome**
CO1	Understand the design philosophy and principles.
CO2	Solve engineering problems of RC elements subjected to flexure, shear and
CO3	Demonstrate the procedural knowledge in designs of RC structural elements such
CO4	Owns professional and ethical responsibility
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**V**
Course Name	**Basic Geotechnical Engineering**
Course Code	**18CV54**
Course	**Course Outcome**
CO1	Ability to plan and execute geotechnical site investigation program for different
CO2	Understanding of stress distribution and resulting settlement beneath the loaded
CO3	Ability to estimate factor of safety against failure of slopes and to compute lateral
CO4	Ability to determine bearing capacity of soil and achieve proficiency in
CO5	Capable of estimating load carrying capacity of single and group of piles
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**VI**
Course Name	**Municipal Wastewater Engineering**
Course Code	**18CV55**

Course	**Course Outcome**
CO1	Select the appropriate sewer appurtenances and materials in sewer network
CO2	Design the sewers network and understand the self purification process in flowing
CO3	Deisgn the varies physic- chemical treatment units
CO4	Design the various biological treatment unit
CO5	Design various AOPs and low cost treatment units.
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**V**
Course Name	**Highway Engineering**
Course Code	**18CV56**
Course	**Course Outcome**
CO1	Acquire the capability of proposing a new alignment or re-alignment of existing
CO2	Evaluate the engineering properties of the materials and suggest the suitability of
CO3	Design road geometrics, structural components of pavement and drainage.
CO4	Evaluate the highway economics by few select methods and also will have a basic
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**V**
Course Name	**Surveying Practice**
Course Code	**18CVL57**
Course	**Course Outcome**
CO1	Apply the basic principles of engineering surveying and for linear and angular
CO2	Comprehendeffectivelyfieldproceduresrequiredforaprofessionalsurvey
CO3	Use techniques, skills and conventional surveying instruments necessary f o r
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**V**
Course Name	**Concrete and Highway Materials Laboratory**
Course Code	**18CVL58**
Course	**Course Outcome**
CO1	Able to interpret the experimental results of concrete and highway materials based
CO2	Determine the quality and suitability of cement
CO3	Design appropriate concrete mix Using Professional codes
CO4	Determine strength and quality of concrete
CO5	Evaluate the strength of structural elements using NDT techniques
CO6	Test the soil for its suitability as sub grade soil for pavements.
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**V**
Course Name	**Environmental Studies**
Course Code	**18CIV59**
Course	**Course Outcome**
CO1	Understand the principles of ecology and environmental issues that apply to air,
CO2	Develop critical thinking and/or observation skills, and apply them to the analysis
CO3	Demonstrate ecology knowledge of a complex relationship between biotic and a
CO4	Apply their ecological knowledge to illustrate and graph a problem and describe
Table 1: Course Outcomes	

Class	**CIVIL ENGINEERING**
Semester	**VI**
Course Name	**Design of Steel Structural Elements**
Course Code	**18CV61**
Course	**Course Outcome**
CO1	Possess knowledge of Steel Structures Advantages and Disadvantages of Steel
CO2	Understand the Concept of Bolted and Welded connections.
CO3	Understand the Concept of Design of compression members, built-up columns and
CO4	Understand the Concept of Design of tension members, simple slab base and
CO5	Understand the Concept of Design of laterally supported and un-supported steel
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**VI**
Course Name	**Applied Geotechnical Engineering**
Course Code	**18CV62**
Course	**Course Outcome**
CO1	Ability to plan and execute geotechnical site investigation program for different
CO2	Understanding of stress distribution and resulting settlement beneath the loaded
CO3	Ability to estimate factor of safety against failure of slopes and to compute lateral
CO4	Ability to determine bearing capacity of soil and achieve proficiency in
CO5	Capable of estimating load carrying capacity of single and group of piles
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**VI**
Course Name	**Hydrology and Irrigation Engineering**
Course Code	**18CV63**
Course	**Course Outcome**
CO1	Understand the importance of hydrology and its components
CO2	Measure precipitation and analyze the data and analyze the losses in precipitation.
CO3	Estimate runoff and develop unit hydrographs.
CO4	Find the benefits and ill-effects of irrigation
CO5	Find the quantity of irrigation water and frequency of irrigation for various crops
CO6	Find the canal capacity, design the canal and compute the reservoir capacity.
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**VI**
Course Name	**Raiways, Harbour, Tunneling and Airports**
Course Code	**18CV645**
Course	**Course Outcome**
CO1	Acquires capability of choosing alignment and also design geometric aspects of
CO2	Suggest and estimate the material quantity required for laying a railway track and
CO3	Develop layout plan of airport, harbor, dock and will be able relate the gained
CO4	Apply the knowledge gained to conduct surveying, understand the tunneling
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**VI**
Course Name	**Supply Chain Management**
Course Code	**18ME653**

Course	Course Outcome
CO1	Understand the framework and scope of supply chain management.
CO2	Build and manage a competitive supply chain using strategies, models, techniques
CO3	Plan the demand, inventory and supply and optimize supply chain network
CO4	Understand the emerging trends and impact of IT on Supply chain
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**VI**
Course Name	**Software Application Lab**
Course Code	**18CVL66**
Course	**Course Outcome**
CO1	After studying this course, students will be able to: use software skills in a
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**VI**
Course Name	**Environmental Engineering Laboratory**
Course Code	**18CVL67**
Course	**Course Outcome**
CO1	Acquire capability to conduct experiments and estimate the concentration of
CO2	Compare the result with standards and discuss based on the purpose of analysis.
CO3	Determine type of treatment, degree of treatment for water and waste water
CO4	Identify the parameter to be analyzed for the student project work in
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**VI**
Course Name	**Extensive Survey Project**
Course Code	**18CVEP68**
Course	**Course Outcome**
CO1	Apply Surveying knowledge and tools effectively for the projects
CO2	Understanding Task environment, Goals, responsibilities, Task focus, working in
CO3	Application of individual effectiveness skills in team and organizational context,
CO4	Professional etiquettes at workplace, meeting and genera
CO5	Establishing trust based relationships in teams & organizational environmen
CO6	Orientation towards conflicts in team and organizational environment,
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**VII**
Course Name	**Quality Surveying and Contract Management**
Course Code	**18CV71**
Course	**Course Outcome**
CO1	Taking out quantities and work out the cost and preparation of abstract for the
CO2	Prepare detailed and abstract estimates for various road works, structural works and
CO3	Prepare the specifications and analyze the rates for various items of wor
CO4	Assess contract and tender documents for various construction work
CO5	Prepare valuation reports of buildings.
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**VII**
Course Name	**Design of RCC and Steel Structures**

Course Code	18CV72
Course	**Course Outcome**
CO1	Students will acquire the basic knowledge in design of RCC and Steel Structures
CO2	Students will have the ability to follow design procedures as per codal provisions and
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**VII**
Course Name	**Air Pollution and Control**
Course Code	**18CV732**
Course	**Course Outcome**
CO1	Identify the major sources of air pollution and understand their effects on health and er
CO2	Evaluate the dispersion of air pollutants in the atmosphere and to develop air quality m
CO3	Ascertain and evaluate sampling techniques for atmospheric and stack pollutants.
CO4	Choose and design control techniques for particulate and gaseous emissions
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**VII**
Course Name	**Design of Hydraulic Structures**
Course Code	**18CV744**
Course	**Course Outcome**
CO1	Check the stability of gravity dams and design the dam
CO2	Estimate the quantity of seepage through earth dams
CO3	Design spillways and aprons for various diversion works.
CO4	Select particular type of canal regulation work for canal network.
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**VII**
Course Name	**Energy and Environment**
Course Code	**18ME751**
Course	**Course Outcome**
CO1	Understand energy scenario, energy sources and their utilization.
CO2	Understand various methods of energy storage, energy management and economic ana
CO3	Analyse the awareness about environment and eco system
CO4	Understand the environment pollution along with social issues and acts
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**VII**
Course Name	**Conputer Aided Detailing of Structure**
Course Code	**18CVL76**
Course	**Course Outcome**
CO1	Prepare detailed working drawing
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**VII**
Course Name	**Geotechnical Engineering Laboratory**
Course Code	**18CVL77**
Course	**Course Outcome**

CO1	Physical and index properties of the soil
CO2	Classify based on index properties and field identification
CO3	To determine OMC and MDD, plan and assess field compaction program
CO4	Shearstrengthandconsolidationparameterstoassessstrengthanddeformationcharacterist
CO5	In-situshear strength characteristics(SPT-Demonstration)
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**VIII**
Course Name	**Design of Pre-Stress Concrete**
Course Code	**18CV81**
Course	**Course Outcome**
CO1	Understand the requirement of PSC members for present scenario.
CO2	Analyse the stresses encountered in PSC element during transfer and at workin
CO3	There will be two full questions (with a maximum of four sub- questions) from each mod
CO4	Each full question will have sub- question covering all the topics under a module
CO5	The students will have to answer five full questions, selecting one full question from eac
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**VIII**
Course Name	**Pavement Design**
Course Code	**18CV825**
Course	**Course Outcome**
CO1	Systematically generate and compile required data's for design of pavement (Highway &
CO2	Analyze stress, strain and deflection by boussinesq's, bur mister's and westergaard's the
CO3	Design rigid pavement and flexible pavement conforming to IRC58-2002 and IRC37-2001
CO4	Evaluate the performance of the pavement and also develops maintenance statement
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**VIII**
Course Name	**Project Work Phase-II**
Course Code	**18CVP83**
Course	**Course Outcome**
CO1	Describe the project and be able to defend it.
CO2	Develop critical thinking and problem solving skills
CO3	Learn to use modern tools and techniques.
CO4	Communicate effectively and to present ideas clearly and coherently both in written and
CO5	Develop skills to work in a team to achieve common goal
CO6	Develop skills of project management and finance.
CO7	Develop skills of self learning, evaluate their learning and take appropriate actions to im
CO8	Prepare them for life-long learning to face the challenges and support the
Table 1: Course Outcomes	
Class	**CIVIL ENGINEERING**
Semester	**VIII**
Course Name	**Technical Seminar**
Course Code	**18CVS84**
Course	**Course Outcome**
CO1	Develop knowledge in the field of Civil Engineering and other disciplines through independent learning and collaborative study.

CO2	Identify and discuss the current, real-time issues and challenges in engineering & techno
CO3	Develop written and oral communication skills
CO4	Explore concepts in larger diverse social and academic contexts.
CO5	Apply principles of ethics and respect in interaction with others.
CO6	Develop the skills to enable life-long learning